

DECLARATION

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Minamimorimachi Building, 1-29, Minamimorimachi 2-chome, Kita-ku, Osaka-shi,
Osaka, Japan, declare:

that I know well both the Japanese and English languages;

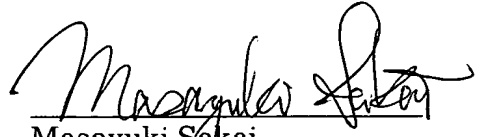
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No. 10-187056, filed on July 2, 1998;

that all statements made of my own knowledge are true;

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[Title of the Invention] Copyrighted Work Distribution Management System and Electronic Copyrighted Work Sales Terminal

[Claims for Patent]

[Claim 1] An electronic copyrighted work distribution management system comprising: a recording medium for recording an electronic copyrighted work; an electronic copyrighted work sales terminal to sell an electronic copyrighted work recorded in said recording medium; a copyright management center administering a copyright or copyright royalty information associated with an electronic copyrighted work recorded on the electronic medium; a copyright holder terminal referring to copyright royalty information of said electronic copyrighted work to approve the copyright royalty of said electronic copyrighted work; a seller terminal to which is transmitted copyright royalty information approved and calculated by said copyright holder terminal; and communication means for connecting said copyright management center and each of said apparatuses, wherein copyright royalty information of an electronic copyrighted work on sales is administered.

[Claim 2] The electronic copyrighted work distribution management system according to claim 1, comprising a copyright information storage unit storing information associated with a copyright of an electronic copyrighted work at said electronic copyrighted work sales terminal; a copyright royalty calculation unit to calculate a copyright royalty; a sales terminal communication unit to transmit copyright royalty information to the copyright management center; and a copyright royalty data recording unit in which copyright royalty data of a sold electronic copyrighted work is recorded at the copyright management center, wherein a copyright royalty of said electronic copyrighted work is recorded at said copyright management center.

[Claim 3] The electronic copyrighted work distribution management system according to claim 1, comprising: a management center communication unit; and a copyright data approval processing unit carrying out copyright royalty data processing

on data recorded in said copyright royalty data recording unit of said copyright management center in response to approval from said copyright holder terminal, wherein copyright royalty information is transmitted to said seller terminal based on approval procedure from a copyright holder terminal.

[Claim 4] The electronic copyrighted work distribution management system according to claim 1, comprising a sales information recording unit recording information, when a purchaser conducts a purchase at said sales terminal, associated with initiating transmission or completing recording of copyright royalty data to said copyright management center, or initiating and ending writing to a recording medium, wherein confirmation of said processes being carried out properly can be made.

[Claim 5] The electronic copyrighted work sales terminal according to claims 1-4, comprising: a sales terminal ID storage unit storing ID information of a sales terminal; a sales information recording unit storing information associated with sales; a sales information control unit providing edit control of sales information towards said sales information recording unit; a sales information management unit presenting management information with respect to edit control of data from said sales information control unit to said sales information recording unit; a sales information readout card connected to a sales terminal to read out sales information corresponding to a sales terminal ID stored in said sales terminal ID storage unit; and a sales information management card connection unit to which said sales information readout card is connected, wherein sales information recorded in said sales terminal is read out.

[Claim 6] The electronic copyrighted work sales terminal according to claims 1-4, comprising a sales terminal ID storage unit storing ID information of an electronic copyrighted work sales terminal; a sales information recording unit recording information associated with sales; a sales information control unit carrying out edition of sales information towards said sales information recording unit; a sales information management unit presenting management information with respect to edition of data from said sales information control unit to said sales information recording unit; a sales

information management card connected to a sales terminal to erase sales information corresponding to a sales terminal ID stored in said sales terminal ID storage unit for reading out sales information recorded in said sales information recording unit, and after recording, for erasing information of said sales information recording unit; and a sales information management card connection unit to which said sales information management card is connected, wherein recorded sales information of said sales terminal is administered.

[Claim 7] The electronic copyrighted work sales terminal according to claims 1-4, comprising: a recording medium to record data of an electronic copyrighted work that is to be purchased by a purchaser; a medium inlet for inserting the recording medium; a recording medium storage unit allowing storage of a plurality of inserted media; a data write unit to write data onto a recording medium stored in said recording medium storage unit; and a data storage unit storing data written by said write unit, wherein another purchase procedure is carried out at a sales terminal during a writing operation at said sales terminal.

[Detailed Description of the Invention]

[Technical Field to Which the Invention Belongs]

The present invention relates to an electronic copyrighted work distribution management system and electronic copyrighted work sales terminal to administer copyright royalty information in the distribution of copyrighted works in electronic form such as an electronic book.

[Conventional Art]

In the sales of books based on conventional paper as the medium, a predetermined number of copies corresponding to the expected sales of a book are printed out and distributed at a book shop and the like in accordance with the distribution system. Books are placed at the storefront for sale. These books become the stock at each bookstore until it is sold. There are cases where a book is returned to the publisher that is the origin of the sales when the book is not sold within a

predetermined period of time. It is difficult for the publisher to accurately grasp the number of books sold and the number of books in stock at each book shop. A copyright royalty fee corresponding to a rough estimate of the number of sold copies indicated by the publisher was paid to the copyright holder. Therefore, the proper copyright royalty fee was not always paid to the copyright holder.

Japanese Patent Laying-Open No. 5-89360 discloses an automatic sales system in software, characterized in that an approval number is assigned by an approval center formed of a plurality of copyright approval personnel,

[Problems to be Solved by the Invention]

Books and the like have now become to be distributed as electronic data in a form similar to that of software. Since the procedure of printing is absent in such a case, it has become more difficult for the copyright holder to identify the sales count thereof. Writers are now in a position where it is difficult to obtain the proper copyright royalty.

Japanese Patent Laying-Open No. 5-89360 discloses a system allowing the copyright holder to identify the number of purchased software by administering the sales count in a centralized manner at the approval center. Since the information of sales count is administered in a centralized manner, the risk from the standpoint of security management is high when information transmission is based on a general communication line. Furthermore, suppressing an illegal act on the software automatic sales apparatus by storing the card ID number and user ID number in a card will involve problems as to protecting privacy since the user's purchase information remains. In addition to such unfavorable issues, there is a problem that the anonymity of the purchaser will be exposed to discourage the volition of purchase since the purchase is effected through a specific card in which the user ID number and the like are registered.

Under the state where sales terminals placed at relative sites are connected through a communication line, there is a problem of leakage of the sales information through illegal access.

Furthermore, in the case where administration of a sales terminal through which an electronic copyrighted work is to be sold to purchasers is under control of the installer of the terminal, there is a problem that the installer may conduct illegal sales through the sales terminal or falsify the number of sales. There was a problem that the proper copyright royalty fee may not be paid to the copyright holder.

When the above-described electronic information is sold by being written into a recording medium possessed by the user via a dedicated sales terminal, the time to carry out the operation to select and purchase a book as well as the time for the data to be written into a medium are required. There was a problem that the terminal is occupied by one purchaser during the period of time required in the approval procedure to purchase data.

By virtue of the writing time into a recording medium being shortened and the communication rate being increased in view of the approval procedure being carried out through a communication line, the occupying time of a terminal can be reduced. However, there is a limit in writing a great amount of data such as electronic book data in a short period of time.

A possible approach to solve this problem is to increase the number of terminals according to the number of users. However, it is desirable to accommodate as many users as possible with as few number of units as possible from the standpoint of the expensive exclusive sales terminal and the area required for installation.

[Means for Solving the Problems]

To solve the above problem, the invention of claim 1 of an electronic copyrighted work distribution management system of the present application includes: a recording medium for recording an electronic copyrighted work; an electronic copyrighted work sales terminal to sell an electronic copyrighted work recorded in said recording medium; a copyright management center administering a copyright or copyright royalty information associated with an electronic copyrighted work recorded on the electronic medium; a copyright holder terminal referring to copyright royalty

information of said electronic copyrighted work to approve the copyright royalty of said electronic copyrighted work; a seller terminal to which is transmitted copyright royalty information approved and calculated by said copyright holder terminal; and communication means for connecting said copyright management center and each of said apparatuses, wherein copyright royalty information of an electronic copyrighted work on sales is administered.

In the electronic copyrighted work distribution management system according to claim 1, the invention of claim 2 includes: a copyright information storage unit storing information associated with a copyright of an electronic copyrighted work at said electronic copyrighted work sales terminal; a copyright royalty calculation unit to calculate a copyright royalty; a sales terminal communication unit to transmit copyright royalty information to the copyright management center; and a copyright royalty data recording unit in which copyright royalty data of a sold electronic copyrighted work is recorded at the copyright management center, wherein a copyright royalty of said electronic copyrighted work is recorded at said copyright management center.

In the electronic copyrighted work distribution management system according to claim 1, the invention of claim 3 includes: a management center communication unit; and a copyright data approval processing unit carrying out copyright royalty data processing on data recorded in said copyright royalty data recording unit of said copyright management center in response to approval from said copyright holder terminal, wherein copyright royalty information is transmitted to said seller terminal based on approval procedure from a copyright holder terminal.

In the electronic copyrighted work distribution management system according to claim 1, the invention of claim 4 includes a sales information recording unit recording information, when a purchaser conducts a purchase at said sales terminal, associated with initiating transmission or completing recording of copyright royalty data to said copyright management center, or initiating and ending writing to a recording medium, wherein confirmation of said processes being carried out properly can be made.

In the electronic copyrighted work sales terminal according to claims 1-4, the invention of claim 5 includes: a sales terminal ID storage unit storing ID information of a sales terminal; a sales information recording unit storing information associated with sales; a sales information control unit providing edit control of sales information towards said sales information recording unit; a sales information management unit presenting management information with respect to edit control of data from said sales information control unit to said sales information recording unit; a sales information readout card connected to a sales terminal to read out sales information corresponding to a sales terminal ID stored in said sales terminal ID storage unit; and a sales information management card connection unit to which said sales information readout card is connected, wherein sales information recorded in said sales terminal is read out.

In the electronic copyrighted work sales terminal according to claims 1-4, the invention of claim 6 includes: a sales terminal ID storage unit storing ID information of an electronic copyrighted work sales terminal; a sales information recording unit recording information associated with sales; a sales information control unit carrying out edition of sales information towards said sales information recording unit; a sales information management unit presenting management information with respect to edition of data from said sales information control unit to said sales information recording unit; a sales information management card connected to a sales terminal to erase sales information corresponding to a sales terminal ID stored in said sales terminal ID storage unit for reading out sales information recorded in said sales information recording unit, and after recording, for erasing information of said sales information recording unit; and a sales information management card connection unit to which said sales information management card is connected, wherein recorded sales information of said sales terminal is administered.

In the electronic copyrighted work sales terminal according to claims 1-4, the invention of claim 7 includes: a recording medium to record data of an electronic copyrighted work that is to be purchased by a purchaser; a medium inlet for inserting the

recording medium; a recording medium storage unit allowing storage of a plurality of inserted media; a data write unit to write data onto a recording medium stored in said recording medium storage unit; and a data storage unit storing data written by said write unit, wherein another purchase procedure is carried out at a sales terminal during a writing operation at said sales terminal.

[Embodiment of the Invention]

Embodiments of an electronic copyrighted work sales system of the present invention will be described in detail hereinafter based on the drawings.

[First Embodiment]

Fig. 1 is a block diagram showing a structure of a first embodiment of an electronic copyrighted work distribution management system of the present invention for distributing electronic book data via a dedicated sales terminal to sale electronic books.

The electronic copyrighted work distribution management system of Fig. 1 includes a recording medium 2 to record electronic book data purchased by a purchaser, a sales terminal 1 to write electronic book data to be purchased into a recording medium 2 by purchase procedure of purchaser 3, a copyright management center 4 administering copyright royalty for electronic book data that is purchased, a seller terminal 5 used by a seller 6 who sells said electronic book, and a copyright holder terminal 7 used by a writer 8 who is the copyright holder of said electronic book.

Sales terminal 1 is a terminal for purchaser 3 to purchase an electronic book, and includes a display unit 9, displaying book information to select an electronic book to be purchased as well as display associated with a manipulation method, a manipulation unit 12 to conduct purchasing procedure, a medium inlet 10 to insert a recording medium 2 to record electronic book data that is to be purchased, a book data write unit 13 writing electronic book data selected with respect to the inserted recording medium 2, a medium outlet 11 from which recording medium 2 is output after selected electronic book data is written when the purchase procedure is completed properly, a book data storage unit 14

to store book data of a plurality of electronic books at sales terminal 1, a sales terminal ID storage unit 16 storing an ID number for sales terminal management assigned to each sales terminal 1 placed at respective sites, a sales information recording unit 17 recording information associated with sales of an electronic book at each sales terminal, a copyright royalty information storage unit 20 to store information associated with the copyright royalty of a purchased electronic book, a copyright royalty calculation unit 19 calculating the copyright royalty of a sold electronic book based on information from said copyright royalty information storage unit 20, a sales terminal communication control unit 18 transmitting information through wire such as a telephone line or through radio, and a sales terminal control unit 15 providing control of sales at sales terminal 1 and data management.

Said book data storage unit 14, sales terminal ID storage unit 16, sales information recording unit 17 and copyright royalty information storage unit 20 are nonvolatile memories retaining recorded or stored information that allows electric writing and reading irrespective of main power supply, a memory backed up by a battery, or a recording medium recorded through magnetic means or the like.

Said sales terminal control unit 15 can be realized by a general CPU system formed of a ROM in which an execution program is recorded based on a CPU, and a rewritable RAM used when executing a program.

Said copyright royalty calculation unit 19 has the calculation capability for operation based on copyright information stored in said copyright information storage unit 20 related to an electronic book selected by the purchaser. In practice, it can be implemented by the CPU of sales terminal control unit 15.

Although a medium inlet 10 and a medium outlet 11 are provided separately in sales terminal 1, a structure sharing the same may be employed.

Copyright management center 4 includes a sales terminal information storage unit 23 to administer each sales terminal ID of a sales terminal placed at respective sites where electronic book data is placed on sales, and information associated with the sales

terminal corresponding to respective sales terminal ID, a seller information storage unit 22 administering information associated with the purchaser of an electronic book that is sold via sales terminal 1, a copyright information storage unit 25 to administer information associated with the copyright of an electronic book that is to be sold, a copyright royalty data recording unit 26 recording copyright royalty data with respect to an electronic book sold, a copyright royalty data approval processing unit 27 calculating copyright royalty information and generating information to be transmitted to a seller terminal based on approval procedure carried out by copyright holder 8 through copyright holder terminal 7, a management center communication unit 24 carrying out communication through wire such as a telephone line or radio, and a management center control unit 21 controlling the processing at copyright management center 4.

Seller terminal 5 is a communication terminal capable of data communication with sales terminal 1 and copyright management center 4. Copyright holder terminal 7 is a communication terminal capable of data communication with copyright management center 4. Although the structure is not shown, the terminal can be realized by a general-purpose personal computer including a communication unit, a control unit, a display unit, and a manipulation unit. The terminal is required for the seller and copyright holder to obtain information under control of seller information storage unit 22 and copyright information storage unit 25 corresponding to information associated with the seller terminal and copyright holder terminal.

In Fig. 1, seller terminal 5 and copyright holder terminal 7 are disclosed as being formed separately. In the case where seller 6 owns the copyright of the electronic copyright work from sales, the same terminal can be used as seller terminal 5 and copyright holder terminal 7. The information can be registered as the same one terminal in seller information storage unit 22 and copyright information storage unit 25 of copyright management center 4.

In Fig. 1, a single seller terminal 5 is provided corresponding to seller 6. Administration of sales of an electronic copyrighted work through one seller terminal 5

can be conducted with respect to a plurality of sellers 6.

The process and data flow when purchaser 3 purchases an electronic book will be described based on the flow chart of Fig. 2 with the respect to the operation of the electronic copyrighted work distribution management system in accordance with the first embodiment of the present invention.

At step S1 of Fig. 2, purchaser 3 of Fig. 1 selects an electronic book to be purchased through a manipulation unit 12 following display of display unit 9 of sales terminal 1. At step S2, a recording medium 3 is inserted into medium inlet 10.

At step S3, copyright royalty calculation unit 19 refers to copyright royalty information associated with an electronic book selected by purchaser 3 and stored in copyright royalty information storage unit 20 of Fig. 1 under control of sales terminal control unit 15 of Fig. 1 to calculate copyright royalty.

At step S4, information to initiate transmission of copyright royalty data calculated at step S3 from sales terminal 1 to copyright management center 4 is recorded at sales information recording unit 17. At step S5, copyright royalty data calculated at step S3 is transmitted via communication line 28 from sales terminal communication unit 18 to copyright management center 4.

Management center control unit 21 of copyright management center 4 of Fig. 1 refers to copyright information management unit 25 at step S6 based on copyright royalty data received by management center communication unit 24 to record data into copyright royalty data storage unit 25 that is administered for each copyright holder. At step S7, completion of copyright royalty registration is transmitted from management center communication unit 24 to sales terminal 1 via communication line 28.

At step 8, data indicating that the copyright royalty data has been registered at copyright management center 4 is recorded in sales information recording unit 17 at sales terminal 1 of Fig. 1. At step S9, data indicating initiation of writing the selected electronic book data into recording medium 7 is recorded at sales information recording unit 18. At step S10, writing electronic data into medium write unit 13 is initiated.

At step S11, completion of writing the purchase electronic book data into recording medium 2 is confirmed. When writing has been carried out properly, data indicating writing completion is recorded at sales information recording unit 17. When there is an error during writing and writing could not be completed properly, write error information is recorded in sales information recording unit 17.

Through the steps set forth above, completion of writing data properly is confirmed. At step S12, recording medium 2 is output from medium outlet 11.

In accordance with the processing procedure shown in Fig. 2 of the present invention, check can be made based on information at sales information recording unit 17 of the sales terminal when an error occurs during transmission of copyright royalty data from sales terminal 1 to copyright management center 4 of Fig. 1, as to the difference between data recorded at royalty fee data recording unit 26 of copyright management center 4 and the actual sales history.

In the abnormal case where the operation of the sales terminal stops by electric power failure or the like during the writing operation of electronic data to the recording medium of the purchaser at sales terminal 1 of Fig. 1, the status of only initiating the writing operation is recorded in sales information recording unit 17. Therefore, confirmation can be made that the sales of the data did not end properly. In the case where one electronic book on sales includes copyrighted work by a plurality of writers, the copyright royalty for each writer is calculated at copyright royalty calculation unit 19 based on the information stored in copyright royalty information storage unit 20. The calculated copyright royalty is transmitted to copyright management center 4 by sales terminal communication unit 18, where it can be recorded in copyright royalty data recording unit 26 as data corresponding to each writer based on copyright information storage unit 25.

The data structure related to the above-described copyright royalty distribution management center will be described with reference to Fig. 5.

Fig. 5(a) relates to a general electronic book. It has been produced by one

writer with respect to electronic data corresponding to one book, and has a data structure corresponding to the case where it is distributed in the units of one book. The data structure includes a "book 1-ID" indicating the ID of a book 1, "bibliography information 1" indicating bibliography information associated with a book such as the title of the book, the price, the name of the writer or publisher, and the like, "copyright holder A-ID" indicating information related to a writer A who is the copyright owner of book 1, "copyright royalty information A1" indicating the copyright royalty information related to book 1 of copyright holder A, and "book data A1" corresponding to the body text of a book. In registering book 1 into sales terminal 1 of Fig. 1, "book 1-ID", "bibliography information 1" and "book data A1" are registered in book data storage unit 14 of Fig. 1, whereas "copyright royalty information A1" is registered in copyright royalty information storage unit 20 so as to correspond to "book 1-ID" of "copyright holder A-ID".

Fig. 5(b) shows the data structure of a book written by a plurality of writers. The structure of data when a book 2 is distributed corresponding to one book is shown. With regards to "bibliography information 2" indicating the bibliography information of a book 2 of "book 2-ID" indicating the ID of a book 2, the data structure includes, "copyright holder A-ID" indicating the ID of writer A, and "copyright royalty information A2" indicating the copyright royalty for book 2 of writer A are added to book data A2 that is the copyright portion of writer A, and further with respect to "book data B2" that is the copyright portion of writer B, "copyright holder B-ID" indicating the ID of an writer B, and "copyright royalty information B2" indicating the copyright royalty for book 2 of writer B are added. Into copyright royalty information storage unit 20 of Fig. 1, copyright information related to book 2 is stored as to the portion corresponding to respective writers A and B.

Fig. 5(c) shows a data structure in which a book 3 corresponding to one book is divided per chapter or section. With regards to a book 3-ID indicating the book ID related to book 3 and bibliography information 3 indicating the bibliography information

of book 3, a copyright holder A-ID indicating the ID of a writer A and copyright royalty information A3a corresponding to book data A3a of book 3 of writer A are assigned to book data A3a that is the first distribution unit. Also, a copyright holder A-ID representing the ID of writer A and copyright royalty information A3b corresponding to book data A3b of book # of writer A are assigned with respect to book data A3b that is the second distribution unit. Each is stored for writer A in copyright royalty information recording unit 20 of Fig. 1 as copyright royalty information A3a and copyright royalty information A3b. The copyright royalty may be calculated corresponding to the purchase unit by the purchaser in distribution.

In sales terminal 1 shown in Fig. 1 of the electronic copyrighted work distribution management system and processing procedure of Fig. 2 in accordance with the first embodiment of the present invention, a slot to insert money into sales terminal 1, or a slot to insert a cash card such as a credit card or prepaid card may be provided as the means for charge in the sales. Also, charge accounting can be settled through electronic financial transaction via sales terminal communication unit 18 of Fig. 1, instead of providing a slot for charge accounting. The charging means thereof is not limited here.

In the case where an inlet is provided for the charge account, sales terminal 1 is installed at the store of stalls, book shop, and the like as a dedicated terminal to have the payment of the charge account in response to sales collected. In the case where an inlet for the charge account is not provided, sales terminal 1 can be realized by a general personal computer. Sales terminal ID information is prestored at the magnetic recording unit such as a hard disk of a personal computer at sales terminal ID storage unit 16. Alternatively, information associated with sales terminal ID is input through manipulation unit 12 during the purchase, which is stored in the memory of the personal computer. The personal computer owned by an individual can be used as a sales terminal.

In this case, information associated with the individual who is the owner of the

personal computer will be registered as sales terminal ID. In practice, information as to the purchaser who is purchasing an electronic copyrighted work such as an electronic book using that sales terminal is not administered directly. The anonymity of the purchaser is not necessarily lost. Therefore, distribution of an electronic copyrighted work can be administered without degrading the advantage of the present invention.

In the first embodiment, a communication line 28 coupling sales terminal 1 with copyright management center 4, seller terminal 5 and copyright holder terminal 7 is shown as using the general public line. It is also possible to establish connection with the entirety or a portion utilizing an exclusive line. Additionally, communication means through radio utilizing a satellite or the like can be employed.

Although description is based on distribution of an electronic book in which book data is rendered in electronic form as the electronic copyrighted work distributed in the present embodiment, electronic copyrighted work of various types such as data corresponding to music converted into electronic form, a program for a personal computer, software dedicated to a game, or the like may be distributed by the electronic copyrighted work distribution management system of the present invention.

By handling an electronic copyrighted work other than an electronic book through book data write unit 13 and book data storage unit 14 of Fig. 1, an electronic copyrighted work other than the above-described electronic book can be placed on sales through sales terminal 1 of Fig. 1. A sales terminal that sells only an electronic copyrighted work other than the above-described electronic book may be used.

[Second Embodiment]

Fig. 3 is a block diagram showing a structure of the second embodiment in an electronic copyrighted work distribution management system of the present invention. Common elements with the same function as those of the electronic copyrighted work distribution system shown in Fig. 1 of the first embodiment have the same reference characters allotted. Since the internal structure of copyright management center 4 of Fig. 1 is not directly related to the invention of the present embodiment, description

thereof will not be repeated here.

In the second embodiment, a sales terminal of an electronic copyrighted work distribution management system to administer edition of sales information such as writing, reading, and erasing with respect to sales information recording unit 32 in the sales terminal to sale an electronic book will be described.

A sales terminal 29 of Fig. 3 partially differing in structure from sales terminal 1 of the electronic copyrighted work distribution management system shown in Fig. 1 of the first embodiment includes a sales information control unit 31 providing control on edition of data to sales information recording unit 30, a sales information management unit 32 administering execution of data edition with respect to sales information recording unit 30 at sales information control unit 31, a sales information readout card 34 corresponding to a sales terminal ID stored in sales terminal ID storage unit 16 of sales terminal 29 for reading out information recorded in sales information record 30, and a management card storage unit 36 to read out sales information recorded in sales information record unit 30 and recording the same. Additionally, a sales information management card 35 in which is recorded information to allow information recorded in sales information recording unit 30 of sales terminal 29 to be erased, and a sales information management card connection unit 33 to connect sales information readout card 34 and sales information management card 35 with sales terminal 29 are added.

In sales information recording unit 30 of Fig. 3, communication history with copyright management center 4 in the sales indicated in the first embodiment and information of the book data writing history into recording medium 2 are recorded. At sales information record control unit 31 of Fig. 3, said sales information is written without any constraint on the addition of sales information.

Reading out information recorded in sales information recording unit 30 of Fig. 3 is executed by connecting sales information readout card 34 with sales information management card connection unit 33, and conducting the operation of reading out sales information through manipulation unit 12 of sales terminal 29 of Fig. 3. At sales

information control unit 31, confirmation is made that sales information readout card 34 is connected to sales information management unit 32. The necessary information is read out from the sales information recorded in sales information recording unit 30 to be displayed at display unit 9, or recorded into a recording medium inserted through a medium inlet. Furthermore, it can be printed out through a printer connected to or incorporated at a sales terminal not shown in Fig. 4. Thus, sales information can be read out.

At sales terminal 29, a program to read out sales information recorded in sales information recording unit 30 is partially recorded corresponding to a sales terminal ID stored in sales terminal ID storage unit 16. The remaining portion of the program to read out information recorded in sales information recording unit 30 corresponding to the sales terminal ID stored in sales terminal ID storage unit 16 of sales terminal 29 is stored in sales information readout card 34. Sales information can be read out from sales information recording unit 30 only after sales information readout card 34 is connected with sales information management card connection unit 33.

By a specific operation involving a password, for example, through manipulation unit 12 of sales terminal 29, sales information control unit 31 can provide control such that a circuit to read information recorded in sales information recording unit 30 is connected with respect to sales information management unit 32. Alternatively, by reading out a program to read out sales information stored in sales information management unit 32, information recorded in sales information recording unit 30 can also be read out.

When an electronic book is sold through sales terminal 29 of Fig. 3 in the electronic copyrighted work distribution management system of the present invention, sales information is accumulated in sales information recording unit 30 of Fig. 3. When accumulated data is to be erased, sales information management card 35 corresponding to the sales terminal ID stored in sales terminal ID storage unit 16 of sales terminal 29 of Fig. 3 is connected with sales information management card connection unit 33. By

conducting an operation of erasing the sales information through manipulation unit 12 of sales terminal 29 of Fig. 3, sales information control unit 31 confirms that sales information management card 35 corresponding to the sales terminal ID stored in sales terminal ID storage unit 16 is connected with sales information management unit 32, reads out the sales information recorded in sales information recording unit 30, and writes into management card storage unit 36 incorporated in sales information management card 35 to erase the information recorded in sales information recording unit 30 of Fig. 3.

At sales terminal 29, a portion of a program to erase sales information recorded in sales information recording unit 30 corresponding to the sales terminal ID recorded in sales terminal ID storage unit 16 is recorded. At sales information management card 35, the remaining portion of the program to erase information recorded in sales information recording unit 30 corresponding to the sales terminal ID stored in said terminal ID storage unit 16 of sales terminal 29 is stored. Sales information is erased from sales information recording unit 30 only after sales information management card 35 is connected to sales information management card connection unit 33.

In accordance with the second embodiment of the present invention, the usage of the above-described sales information record card 34 and sales information management card 35 disables illegal connection with sales terminal 29 by a general purchaser or via a sales terminal communication unit 18 through a communication line 28 to read out illegally information recorded in sales information recording unit 30 or intentionally rewriting data or erasing data.

It can be considered that administration of sales information in a centralized manner can be similarly implemented using the above-described sales information management card 35 of the present invention by administering sales information recorded in management card storage unit 36 of sales information management card 35. Since the accumulation administration of sales information is carried out individually in contrast to the centralized administration of the sales information by communication

means such as a general line, the risk of sales information being accessed illegally or leaking is extremely low. Also, falsifying the sales information at the sales terminal can be prevented.

[Third Embodiment]

Fig. 4 is a block diagram showing a structure of a third embodiment in the electronic copyrighted work distribution management system of the present invention. Common elements with the same capability at those of the electronic copyrighted work distribution system shown in Fig. 1 of the first embodiment have the same reference characters allotted. Furthermore, since the internal structure of copyright management center 4 of Fig. 1 is not directly related to the invention of the present embodiment, description thereof will not be repeated here.

The invention of the third embodiment relates to a sales terminal to overcome the problem of the sales terminal being occupied by purchaser 3 by the writing operation of electronic book data described in the first embodiment into a recording medium 2.

A sales terminal partially differing in structure from sales terminal 1 shown in Fig. 1 of the first embodiment in Fig. 4 additionally includes a recording medium storage unit 38 in which a recording medium 2 inserted through medium inlet 10 is to be temporarily stored. Under control by sales terminal control unit 39, sales terminal 37 can be used in a state where a plurality of recording medium are stored.

Sales terminal 37 is directed to have a recording medium 2 inserted through medium inlet 1 of Fig. 4 by a user to temporarily store recording medium 2 inserted in recording medium storage unit 38.

Purchaser 3 then operates manipulation unit 12 following the display at display unit 9 of Fig. 4 to select electronic book data that is to be purchased. After the purchase procedure is completed, information to output the recording medium displayed at display unit 9, or output through a printer connected to or incorporated in sales terminal 37 not shown in Fig. 4 is obtained, and the purchase operation ends.

Sales terminal 37 accepts a purchase operation carried out by another purchaser

not shown in Fig. 4, and also reads out the electronic book data previously specified for purchase is read out by book data storage unit 14, and written by book data write unit 13 into recording medium 2 stored in recording medium storage unit 38. When the writing operation ends, information notifying purchaser 3 that the writing operation of the purchase book data into recording medium 2 has ended is displayed at display unit 9 of Fig. 4 or at another display device not shown.

With regards to notifying completion of writing to recording medium 3, notification can be made through a communication device owned by purchaser 3 or a reception device to notify writing into recording medium 2 of purchaser 3 when the purchase procedure with respect to sales terminal 37 has ended. Purchaser 3 can be notified of completion of writing into recording medium 3 even when located remote from sales terminal 37.

At sales terminal 37 of the electronic copyrighted work distribution management system of the third embodiment, a purchase procedure by a different purchaser can be effected parallel to writing electronic data into book data write unit 13. Therefore, the sales terminal can be operated in high efficiency.

[Advantage of the Invention]

In accordance with the present invention, the amount to be paid as to the copyright royalty when sales is conducted through a sales terminal in the sales and distribution of a copyrighted work in an electronic form is calculated, and copyright royalty data is recorded at the copyright management center when the data of purchase is written into a recording medium owned by the purchaser. Therefore, the copyright royalty can be calculated accurately without centralized administration of sales information. The problem of copyright royalty not being paid due to falsifying the selling account can be avoided.

By incorporating approval by a copyright management center in the sales system as to the sales of an electronic copyrighted work, any illegal sales whose copyright data is not set at a sales terminal can be identified by the relationship between the approval

history and sales data through the copyright management center based on sales information record.

Furthermore, any trouble between the actual sales count and copyright royalty payment with respect to abnormal cases caused by the failure of electric power or the like during the sales procedure can be avoided.

Additionally, by using a sales information record card and sales information management card at the sales terminal in the electronic copyrighted work distribution management system of the second embodiment of the present invention, illegal connection to a sales terminal through a general purchaser for communication line through illegally used sales information can be avoided.

Furthermore, by carrying out a purchase procedure by a different purchaser parallel to a writing operation of electronic book data at the sales terminal of the electronic copyrighted work distribution management system of the third embodiment of the present invention, the sales terminal can be operated in favorable efficiency.

[Brief Description of the Drawings]

Fig. 1 is a block diagram showing a structure of a first embodiment of an electronic copyrighted work distribution management system and sales apparatus of the present invention.

Fig. 2 is a flow chart of the process flow at the electronic copyrighted work distribution management system of Fig. 1.

Fig. 3 is a block diagram showing a structure of a second embodiment of an electronic copyrighted work distribution management system and sales terminal of the present invention.

Fig. 4 is a block diagram showing a structure of a third embodiment of an electronic copyrighted work distribution management system and sales terminal of the present invention.

Fig. 5 is a data structure diagram, wherein (a), (b) and (c) show the structure of book data in the electronic copyrighted work distribution management system of the

present invention.

[Description of Reference Characters]

- 1 sales terminal
- 2 recording medium
- 3 purchaser
- 4 copyright management center
- 5 sales terminal
- 6 seller
- 7 copyright holder terminal
- 8 copyright holder
- 9 display unit
- 10 medium inlet
- 11 medium outlet
- 12 manipulation unit
- 13 book data write unit
- 14 book data storage unit
- 15 sales terminal control unit
- 16 sales terminal ID storage unit
- 17 sales information recording unit
- 18 sales terminal communication unit
- 19 copyright royalty calculation unit
- 20 copyright royalty information storage unit
- 21 management center control unit
- 22 seller information storage unit
- 23 sales terminal information storage unit
- 24 management center communication unit
- 25 copyright information storage unit
- 26 copyright royalty data recording unit

- 27 copyright royalty data approval unit
- 28 communication line
- 29 sales terminal
- 30 sales information management unit
- 31 sales information record control unit
- 32 sales information recording unit
- 33 sales information management card connection unit
- 34 sales information readout card
- 35 sales information management card
- 36 management card storage unit
- 37 sales terminal
- 38 recording medium storage unit
- 39 sales terminal control unit

[Document Name] Abstract

[Abstract]

[Subject] In sales distribution of a copyrighted work that is in an electronic form, security of individual information when an electronic book is to be purchased is ensured. Furthermore, the sales count is calculated without centralized administration of sales information to allow proper copyright royalty information to be presented to the copyright holder.

[Solving Means] Includes a recording medium to record an electronic copyrighted work, an electronic copyrighted work sales terminal to sell an electronic copyrighted work recorded in the recording medium, a copyright management center administering copyright or copyright royalty information associated with an electronic copyrighted work recorded in the electronic medium, a seller terminal that can refer to copyright royalty information of the electronic copyrighted work, a copyright holder terminal to approve copyright royalty of the electronic copyrighted work, and communication means for connecting the copyright management center and each of the apparatuses set forth above. The copyright royalty information of an electronic copyrighted work that is to be sold is administered.

[Selected Figure] Fig. 1

出願書類グループ

1998/07/02 11:02:59

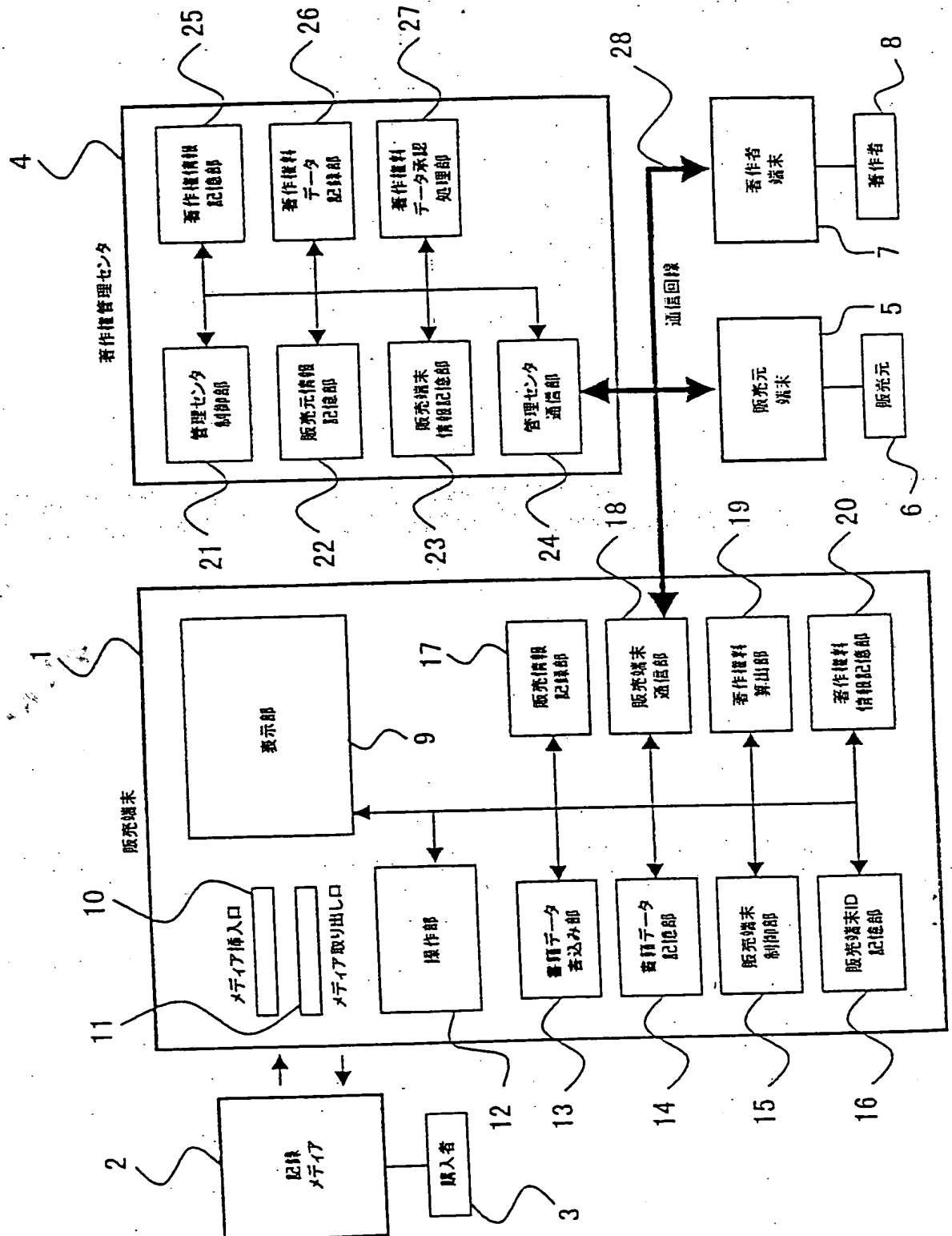
ファイル名 = p9801670

JP10-187056

メーサ ----- 10 ----- 20 ----- 30 -----

コード 【書類名】 図面
document name drawings
【図 1】
Fig. 1

イメージ

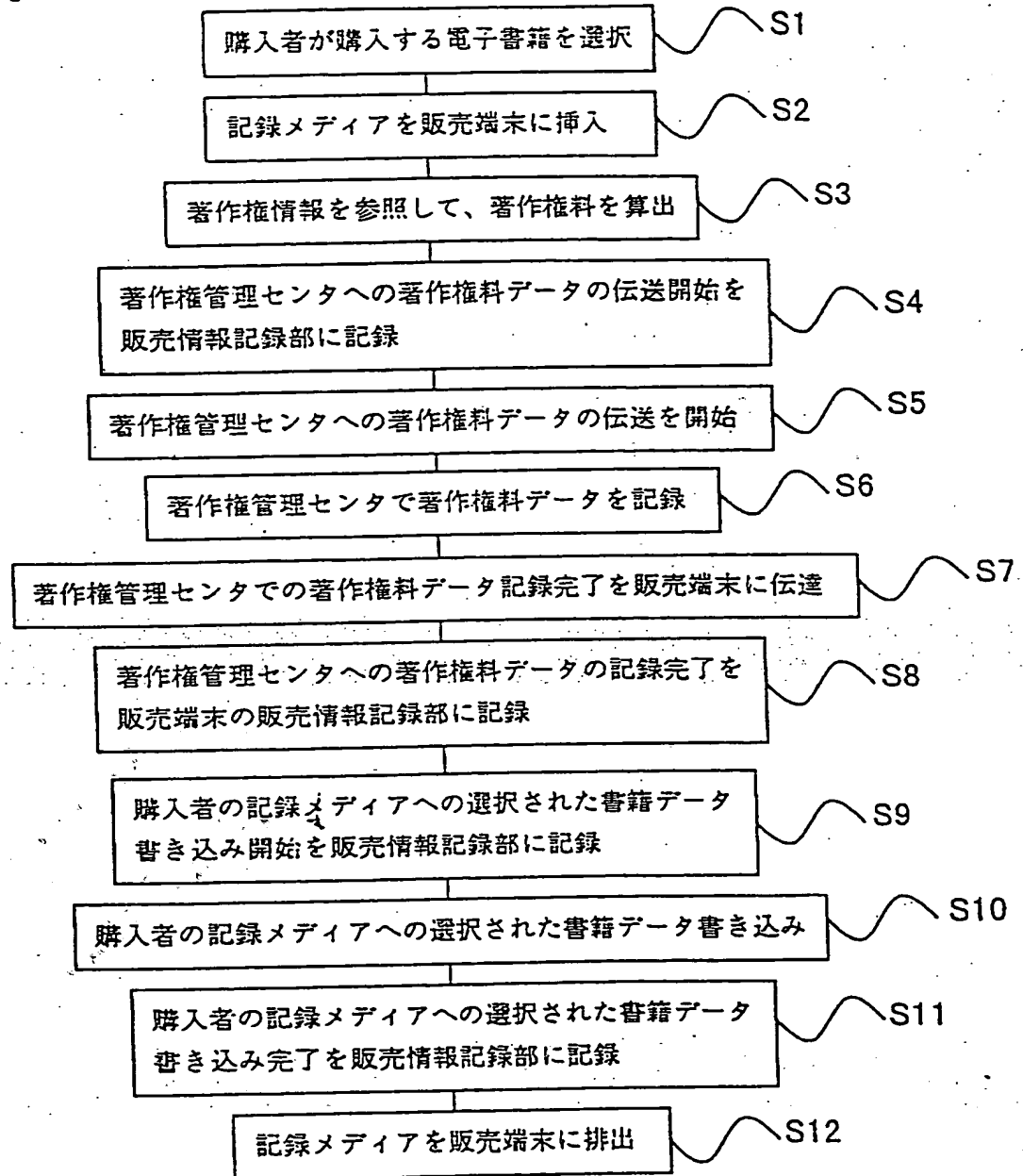


ファイル名 = p9801670

メッセージ ----- 10 ----- 20 ----- 30 -----

コード 【図 2】

イメージ Fig. 2



出願書類プルーフ

1998/07/02 11:03:01

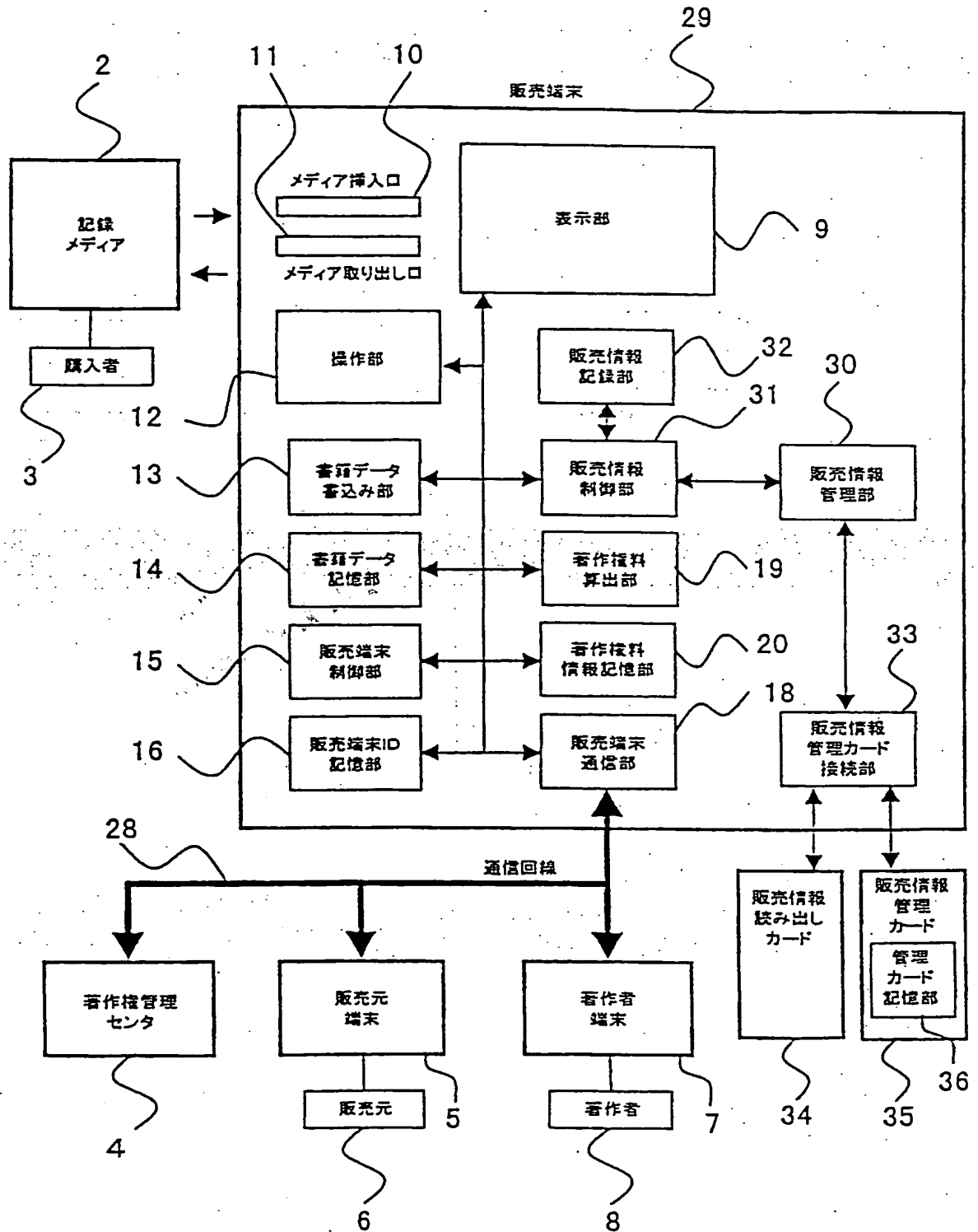
ファイル名 = p9801670

メッセージ ----- 10 ----- 20 ----- 30 -----

コード 【図 3】

Fig. 3

イメージ

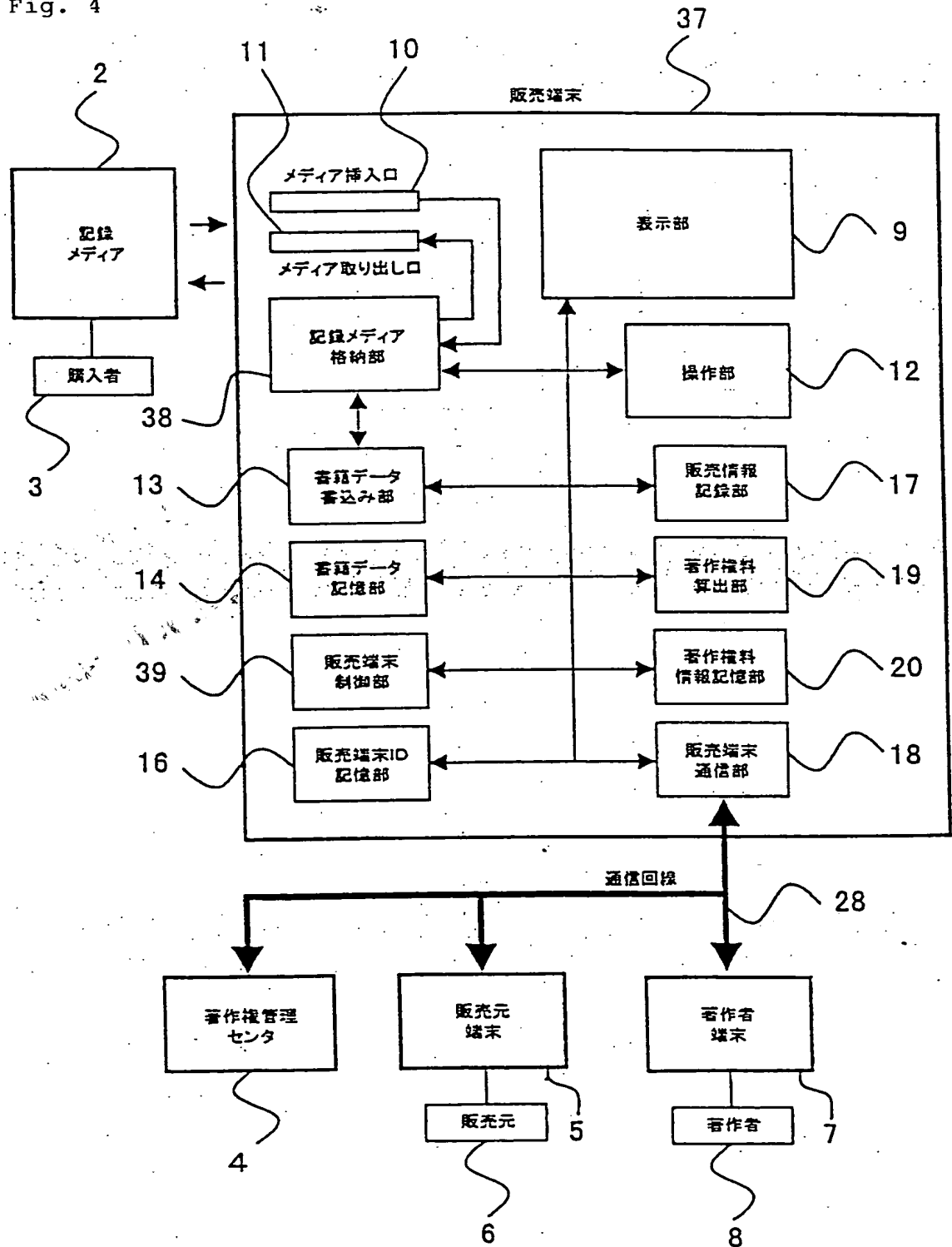


ファイル名 = p9801670

メッセージ ----- 10 ----- 20 ----- 30 -----

コード 【図 4】

イメージ Fig. 4



出願書類ブルーフ

1998/07/02 11:03:02

ファイル名 = p9801670

メッセージ ----- 10 ----- 20 ----- 30 -----

コード 【図 5】

イメージ Fig. 5

書籍1-ID
書誌情報1
著作者A-ID
著作権料情報A1
書籍データA1

(a)

書籍2-ID
書誌情報2
著作者A-ID
著作権料情報A2
書籍データA2
著作者B-ID
著作権料情報B2
書籍データB2
:

(b)

書籍3-ID
書誌情報3
著作者A-ID
著作権料情報A3a
書籍データA3a
著作者A-ID
著作権料情報A3b
書籍データA3b
:

(c)

Fig. 1

- 1 sales terminal
- 2 recording medium
- 3 purchaser
- 10 medium inlet
- 11 medium outlet
- 12 manipulation unit
- 13 book data write unit
- 14 book data storage unit
- 15 sales terminal control unit
- 16 sales terminal ID storage unit
- 9 display unit
- 17 sales information recording unit
- 18 sales terminal communication unit
- 19 copyright royalty calculation unit
- 20 copyright royalty information storage unit
- 4 copyright management center
- 21 management center control unit
- 22 seller information storage unit
- 23 sales terminal information storage unit
- 24 management center communication unit
- 25 copyright information storage unit
- 26 copyright royalty data recording unit
- 27 copyright royalty data approval processing unit
- 28 communication line
- 5 seller terminal
- 6 seller
- 7 copyright holder terminal
- 8 copyright holder

Fig. 2

- S1 purchaser selects an electronic book to be purchased
- S2 insert recording medium into sales terminal
- S3 calculate copyright royalty referring to copyright information
- S4 record to sales information recording unit the start of transmission of copyright royalty data to copyright management center
- S5 start transmission of copyright royalty data to copyright management center
- S6 record copyright royalty data at copyright management center
- S7 transmit to seller terminal completion of copyright royalty data recording at copyright management center
- S8 record into sales information recording unit of seller terminal completion of recording of copyright royalty data to copyright management center
- S9 record in sales information recording unit the start of writing selected book data into recording medium of purchaser
- S10 write selected book data into recording medium of purchaser
- S11 record in sales information recording unit completion of writing selected book data into recording medium of purchaser
- S12 discharge recording medium to sales terminal

Fig. 3

- 2 recording medium
- 3 purchaser
- 29 sales terminal
- 10 medium inlet
- 11 medium outlet
- 12 manipulation unit
- 13 book data write unit

- 14 book data storage unit
- 15 sales terminal control unit
- 16 sales terminal id storage unit
- 9 display unit
- 32 sales information recording unit
- 31 sales information control unit
- 19 copyright royalty calculation unit
- 20 copyright royalty information storage unit
- 18 sales terminal communication unit
- 4 copyright management center
- 5 seller terminal
- 6 seller
- 7 copyright holder terminal
- 8 copyright holder
- 30 sales information management unit
- 33 sales information management card connection unit
- 34 sales information readout card
- 35 sales information management card
- 36 management card storage unit

Fig. 4

- 37 sales terminal
- 2 recording medium
- 3 purchaser
- 10 medium inlet
- 11 medium outlet
- 38 recording medium storage unit
- 13 book data write unit

- 14 book data storage unit
- 39 sales terminal control unit
- 16 sales terminal id storage unit
- 9 display unit
- 12 manipulation unit
- 17 sales information recording unit
- 19 copyright royalty calculation unit
- 20 copyright royalty information storage unit
- 18 sales terminal communication unit
- 28 communication line
- 4 copyright management center
- 5 seller terminal
- 6 seller
- 7 copyright holder terminal
- 8 copyright holder

Fig. 5(a)

book 1-ID
 document information 1
 copyright holder A-ID
 copyright royalty information A1
 book data A1

(b)

book 2-ID
 document information 2
 copyright holder A-ID
 copyright royalty information A2
 book data A2

copyright holder B-ID
copyright royalty information B2
book data B2

(c)

book 3-ID
document information 3
copyright holder A-ID
copyright royalty information A3a
book data A3a
copyright holder A-ID
copyright royalty information A3b
book data A3b